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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,134	01/07/2004	Gregory Joseph Skibinski	05980 USA	4420

23543 7590 07/10/2006

AIR PRODUCTS AND CHEMICALS, INC.
PATENT DEPARTMENT
7201 HAMILTON BOULEVARD
ALLENTOWN, PA 181951501

EXAMINER

DOERRLER, WILLIAM CHARLES

ART UNIT	PAPER NUMBER
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3744

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/753,134

Applicant(s)

SKIBINSKI, GREGORY JOSEPH

Examiner

William C. Doerfler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9,11-14,17-21,24-27 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 4,5,10,15,16,22,23 and 28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some *. c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1-7-2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

Claims 11, 14 and 25 are objected to because of the following informalities: In line 2 of claim 11, "are is" should be changed to --are--. In the penultimate line of claim 14, --in-- should be added between "is" and "communication". In line 2 of claim 25, one of "provide produce", should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-9, 11-14, 17-21, 24-27 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barr et al (2005/0061367).

Barr et al disclose applicant's basic inventive concept, a gas supply system with cryogenic liquid tanks (2 and 4, with paragraph 42 stating that cryogenic liquids can be mixed) which supply liquids to mixing chambers 10 and 12 to provide a mixed gas, and a high pressure gas mixture storage system (32) with controls to provide a constant, uninterrupted supply of mixed gas (paragraph 43 discusses the monitoring of the system tanks), substantially as claimed with the exception of specifying that the system is used as a backup system. It is considered obvious that any known system can be used as a backup system. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the device of Barr et al as a backup device to

ensure an uninterrupted supply of mixed gas if the primary system should fail. In regard to claims 3,14 and 21, the pressure ratio is seen as a matter of ordinary design choice for an ordinary practitioner depending on the economies of storage (number and characteristics of tanks needed and energy required to achieve and maintain those conditions) and the conditions desired for use. In regard to claims 7,14,18 and 25, Official Notice is taken that compressors are well known in the art to compress a gas to the desired conditions, and as such would have been an obvious modification for an ordinary practitioner in the art to provide gas at the desired conditions. In regard to claims 8 and 26, the time the compressed mixed gas storage system can provide the mixed gas is seen as a matter of obvious design choice for an ordinary practitioner in the art, depending on the amount of gas to be used in a given time and the space required to store the volume of gas, as well as the time required for the cryogenic mixing system to achieve the desired results. It is noted that claims 9,14 and 27 claim that the cryogenic liquids --can-- be stored at low pressures. It is noted that any cryogenic liquid can be stored at low pressures and applicant has not claimed that the liquid is stored at low pressures.

Claims 1-3,6-9,11-14,17-21,24-27 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata et al et al (5,798,455).

Sakata et al disclose, particularly in figure 21, applicant's basic inventive concept, a gas supply system with cryogenic liquid tanks which supply liquids to mixing chambers to provide a mixed gas (gas generator 36), and a high pressure gas mixture storage system (82) with controls to provide a constant, uninterrupted supply of mixed gas,

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substantially as claimed with the exception of specifying that the system is used as a backup system. It is considered obvious that any known system can be used as a backup system. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use the device of Sakata et al as a backup device to ensure an uninterrupted supply of mixed gas if the primary system should fail. In regard to claims 3,14 and 21, the pressure ratio is seen as a matter of ordinary design choice for an ordinary practitioner depending on the economies of storage (number and characteristics of tanks needed and energy required to achieve and maintain those conditions) and the conditions desired for use. In regard to claims 7,14,18 and 25, Official Notice is taken that compressors are well known in the art to compress a gas to the desired conditions, and as such would have been an obvious modification for an ordinary practitioner in the art to provide gas at the desired conditions. In regard to claims 8 and 26, the time the compressed mixed gas storage system can provide the mixed gas is seen as a matter of obvious design choice for an ordinary practitioner in the art, depending on the amount of gas to be used in a given time and the space required to store the volume of gas, as well as the time required for the cryogenic mixing system to achieve the desired results. It is noted that claims 9,14 and 27 claim that the cryogenic liquids --can-- be stored at low pressures. It is noted that any cryogenic liquid can be stored at low pressures and applicant has not claimed that the liquid is stored at low pressures.

Allowable Subject Matter

Claims 4,5,10,15,16,22,23 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

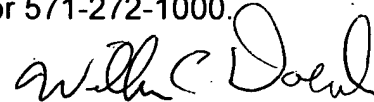
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wodjenski shows a switching system for switching between gas sources. Nishikawa et al shows a gas backup system. Halvorson shows a high pressure cryogenic gas supply device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Doerrler whose telephone number is (571) 272-4807. The examiner can normally be reached on Monday-Friday 6:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William C Doerrler
Primary Examiner
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WCD